

18FX6A

Pentagrid Converter

7-PIN MINIATURE TYPE

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage (AC or DC)	18	volts
Current	0.1 ± 6%	amp
Warm-up time (Average)	20	sec

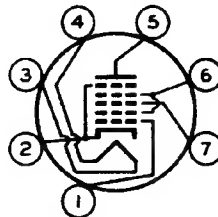
Direct Interelectrode Capacitances:

	Without External Shield	With External Shield ^a	
Grid No.3 to all other electrodes (RF input)	7	7	μf
Plate to all other electrodes (Mixer input)	8	13	μf
Grid No.1 to all other electrodes (Oscillator input)	5.5	5.5	μf
Grid No.3 to plate	0.3 max.	0.25 max.	μf
Grid No.3 to grid No.1	0.15 max.	0.15 max.	μf
Grid No.1 to plate	0.1	0.05	μf
Grid No.1 to cathode & grid No.5	3	3	μf
Cathode & grid No.5 to all other electrodes except grid No.1	15	20	μf

Mechanical:

Operating Position	Any
Maximum Overall Length	2-1/8"
Maximum Seated Length	1-7/8"
Length, Base Seat to Bulb Top (Excluding tip)	1-1/2" ± 3/32"
Diameter	0.650" to 0.750"
Dimensional Outline	See <i>General Section</i>
Bulb	T5-1/2
Base	Small-Button Miniature 7-Pin (JEDEC No.E7-1)
Basing Designation for BOTTOM VIEW	7CH

Pin 1 - Grid No.1
Pin 2 - Cathode,
Grid No.5
Pin 3 - Heater
Pin 4 - Heater



Pin 5 - Plate
Pin 6 - Grid No.2,
Grid No.4
Pin 7 - Grid No.3

CONVERTER

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE	150 max.	volts
GRIDS-No.2 & No.4 (SCREEN-GRIDS) SUPPLY VOLTAGE	150 max.	volts



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GRIDS-No.2 & No.4 VOLTAGE.	110 max.	volts	
GRIDS-No.2 & No.4 INPUT.	1.2 max.	watts	
PLATE DISSIPATION.	1 max.	watt	(
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode.	100 max.	volts	
Heater positive with respect to cathode.	100 max.	volts	

Characteristics:

With Separate Excitation^b

Plate Voltage.	100	volts	(
Grids-No.2 & No.4 Voltage.	100	volts	
Grid-No.3 Voltage.	-1.5	volts	
Grid-No.1 Resistor.	20000	ohms	
Plate Resistance (Approx.)	0.4	megohm	
Conversion Transconductance.	480	μ hos	
Plate Current.	2.3	ma	
Grids-No.2 & No.4 Current.	6.2	ma	(
Grid-No.1 Current.	0.5	ma	
Total Cathode Current.	9	ma	
Grid-No.3 Voltage (Approx.) for conversion transconductance (μ hos) = 10	-21	volts	

Oscillator Characteristics (Not Oscillating):^c

Plate & Grids-No.2 & No.4 Voltage.	100	volts	
Grid-No.3 Voltage.	0	volts	
Grid-No.1 Voltage.	0	volts	
Amplification Factor ^d	22		
Oscillator Transconductance ^d	7000	μ hos	
Cathode Current.	24	ma	
Grid-No.1 Voltage (Approx.) for plate μ_a = 20.	-9.2	volts	

^a With external shield JEDEC No.316 connected to cathode.

^b The characteristics shown with separate excitation correspond very closely with those obtained in a self-excited-oscillator circuit operating with zero bias.

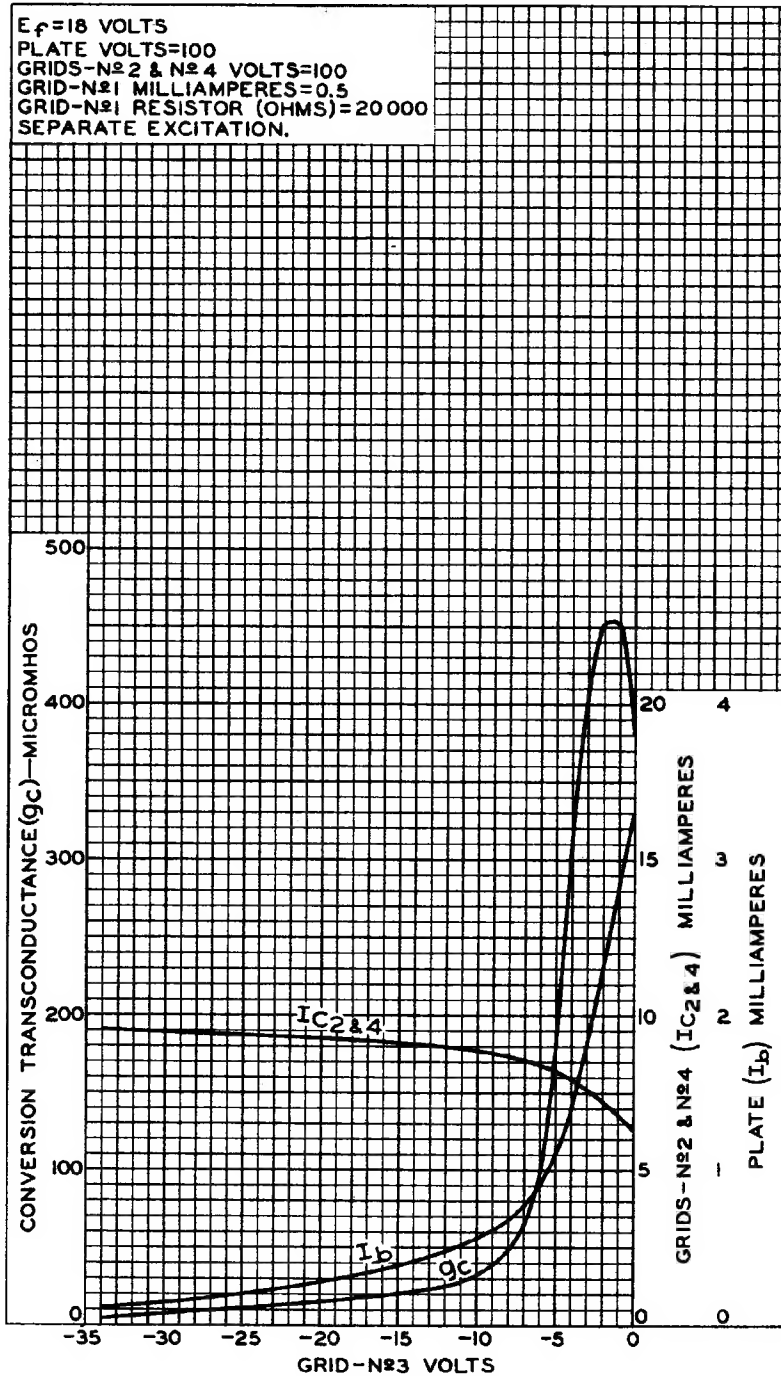
^c With grids No.2 & No.4 connected to plate.

^d Between grid No.1 and grids No.2 & No.4 connected to plate.



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AVERAGE CHARACTERISTICS



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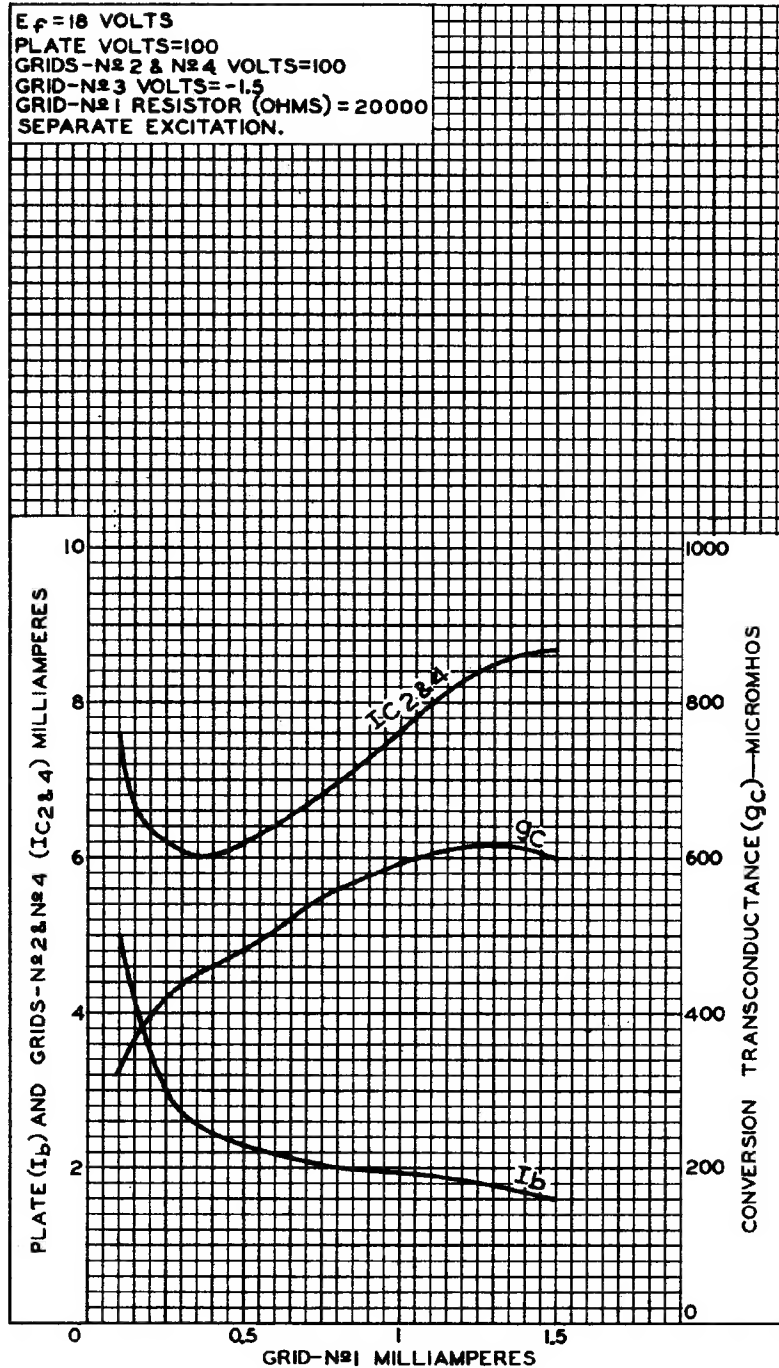


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AVERAGE CHARACTERISTICS



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